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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/775,350 | 02/01/2001 | Yechiam Yemini | 18704-014 | 7201 |
| 56949 | 7590 | 09/08/2006 | EXAMINER | |
| WILMER CUTLER PICKERING HALE AND DORR LLP COLUMBIA UNIVERSITY 399 PARK AVENUE NEW YORK, NY 10020 | | | SHAW, PELING ANDY | |
| | | ART UNIT | PAPER NUMBER | |
| | | | 2144 | |

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-----------------|---------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/775,350 | YEMINI ET AL. |
| | Examiner | Art Unit |
| | Peling A. Shaw | 2144 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 06 February 2006.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-44 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-44 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 09/19/2005

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date 8/31/06 w/cv

5) Notice of Informal Patent Application

6) Other: _____

DETAILED ACTION

1. Applicant has filed Notice of Appeal on 02/06/2006 in response to the office action date 08/04/2005. Examiner has since reconsidered and withdrawn the finality of office action dated 08/04/2005. Claims 1-44 are still pending.
2. Amendment received on 05/16/2005 was entered. Claims 1 and 38 were amended.

Priority

3. This application has claimed the benefits of 60/179,884 filed on 02/02/2000 and 60/216,403 filed on 07/06/2000. The filing date is 02/01/2001.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 3, 5, 6, 7 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Exemplary claim 3 recites the limitation "the network of claim I. There is insufficient antecedent basis for this limitation in the claim. The Examiner will interpret this claim as well as others that recite this, to mean --the network of claim 1--.

Exemplary claims 5 and 7 recite the same limitation.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 9-20, 25, 27-35 and 37-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Jensen et al. (US 5870564 A), hereinafter referred as Jensen.

a. Regarding claim 1, Jensen disclosed a network comprising a plurality of Nodes interconnected by Links (Fig. 2, items 140, 142 and 144: connectors; column 6, lines 38-44: communication links, edges, connectors; column 14, line 62-column 15, line 2: connectors), wherein: (a) each Node is assigned a set of one or more coordinate labels, each representing a path comprising one or more Links or other Nodes (abstract; column 6, line 65-column 7, line 8: mathematical nodes, edges in Cartesian grid; column 7, lines 52-63; column 8, lines 9-13 and 42-46: potential paths; column 18, lines 19-34: On the other hand, the granule 176b along with its edge 178b and underlying or previous granule 172a remain in consideration for inclusion in a potential path, by virtue of the favorable potential edges 182c, 182d, and 182e.); (b) each coordinate label is unique to the Node to which it is assigned (column 6, line 65-column 7, line 17: mathematical nodes, edges in Cartesian grid, distance parameter, topology; column 7, lines 52-63: determining a near-optimal path limits the potential paths, evaluates currently acceptable potential path segments or edges); and (c) a path between a first Node and a second, non-adjacent Node being determined from one of said coordinate labels assigned to said first Node and one of said coordinate labels assigned to said second Node (column 4, lines 25-44: determining an improved path, evaluate a path segment by assessing the benefit of a net path including the path

segment and a potential future path segment depending on the path segment, where a path segment is an edge between adjacent granules in a network, and wherein all costs, distances, measures, metrics, capacities, and the like, along a path between the adjacent granules are associated with the edge there between; column 6, line 65—column 7, line 17: mathematical nodes, edges in Cartesian grid, distance parameter, topology).

- b. Regarding claim 2, Jensen disclosed the network of claim 1 where said coordinate label represents a path between said Node to which said coordinate label is assigned and a root Node (column 7, lines 54-57: initial position; column 12, lines 53-67: an initial x granule 170, see Fig. 5).
- c. Regarding claim 3, Jensen disclosed the network of claim 1 where said coordinate label represents a path between said Node to which said coordinate label is assigned and at least one of a plurality of root Nodes (column 6, lines 45—64: multiple networks; column 7, lines 54-57: initial position; column 12, lines 53-67).
- d. Regarding claim 4, Jensen disclosed the network of claim 1 where at least one of said plurality of Nodes is a computer file (column 28, lines 43-50).
- e. Regarding claim 5, Jensen disclosed the network of claim 1 where at least one of said one or more Links is a directory access path (column 12, lines 53-67).
- f. Regarding claim 6, Jensen disclosed the network of claim 1 where at least one of said plurality of Nodes is a computer process (column 10, lines 10-64).
- g. Regarding claim 7, Jensen disclosed the network of claim 1 where at least one of said one or more Links is a directory access path (column 12, lines 53-67).

- h. Claims 9 and 11 are of the same scope as claim 1. These are rejected for the same reasons as for claim 1.
- i. Regarding claim 10, Jensen disclosed the network of claim 1 wherein each of said set of one or more coordinate labels is periodically updated to reflect changes in said path (column 3, lines 54-60: storing state data associated with the states of a plurality of edges in a network that may be represented as a connected graph, such that the state data is stored in a memory device to be retrievable and periodically updatable).
- j. Regarding claim 12, Jensen disclosed the network of claim 1 wherein said path is determined from said coordinate labels from said network and at least one coordinate label from at least one second network (column 7, lines 45-67).
- k. Regarding claim 13, Jensen disclosed the network of claim 1 wherein at least one of said coordinate labels contains path information from said network and a second network (column 12, lines 45-67).
- l. Claims 14-20, 25, 27-35 and 37-43 are of the same scope as claims 1-7 and 9-13. These are rejected for the same reasons as for claims 1-7 and 9-13.

Jensen disclosed all limitations of claims 1-7, 9-20, 25, 27-35 and 37-43. Claims 1-7, 9-20, 25, 27-35 and 37-43 are rejected under 35 U.S.C. 102(b).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art

to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8, 21-24, 26, 36 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jensen et al. (US 5870564 A), hereinafter referred as Jensen, in view of Huang et al. (US 6041358 A), hereinafter referred as Huang.

- a. Jensen shows claims 1, 27 and 38. Jensen does not show (claim 8) where at least one of said Links is a virtual Link.
- b. Huang shows (claim 8) where at least one of said Links is a virtual Link (column 5, lines 40-67) in an analogous art for the purpose of maintaining virtual local area networks with mobile terminals in an ATM network.
- c. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Jensen's functions of dynamically providing a path through a network of nodes or granules with Huang's functions of implementing virtual local area networks over ATM.
- d. The modification would have been obvious because one of ordinary skill in the art would have been motivated to extend dynamic path provision through networks per Jensen's teaching to virtual local area network over ATM per Huang's teaching as the network technology progressing with VLAN standardization per Huang (column 5, lines 40-60).
- e. Regarding claims 21 and 22, Huang shows wherein a multi-cast tree is computed from a plurality of said set of one or more coordinate labels and where data is routed to a plurality of said plurality of Nodes according to said multi-cast tree (abstract; column 3, lines 55-67).

- f. Regarding claims 23 and 24, Huang shows where said network is a ATM network and where said network is a packet-based network (column 2, lines 65-67; column 3, lines 1-14; column 5, lines 40-44).
- g. Claim 26 and 36 are of the same scope as claim 8. These are rejected for the same reasons as for claim 8.
- h. Regarding claim 44, Huang shows where said set of one or more coordinate labels is further comprised of coordinate labels from a first virtual network, and coordinate labels from at least one second virtual network (column 3, lines 15-67; column 4, lines 1-35).

Together Jensen and Huang disclosed all limitations of claims 8, 21-24, 26, 36 and 44.

Claims 8, 21-24, 26; 36 and 44 are rejected under 35 U.S.C. 103(a).

Response to Arguments

6. Applicant's arguments dated 05/16/2005 with respect to pending claims have been considered but are moot in view of the new ground(s) of rejection.
 - a. Examiner has reviewed the applied art and claim language. The claim rejections are updated accordingly.

Remarks

7. The following pertaining arts are discovered and not used in this office action. Office reserves the right to use these arts in later actions.

- a. Aggarwal et al. (US 6717921 B1) Method for configuring a shared tree for routing traffic in a multicast conference
- b. Beshai et al. (US 6667956 B2) Multi-class network
- c. Yamazaki (US 5655134 A) Network structure storing and retrieval method for a data processor
- d. Ogier et al. (US 20020012320 A1) Mobile ad hoc extensions for the internet

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to the enclosed PTO-892 for details.

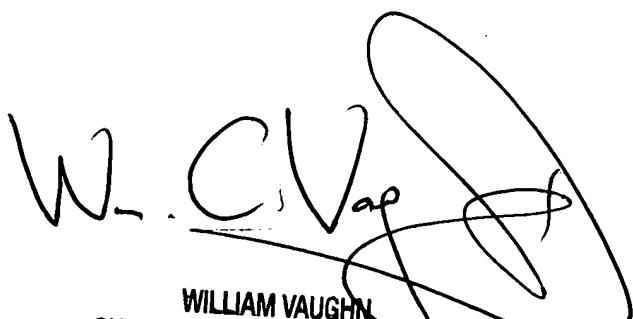
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peling A. Shaw whose telephone number is (571) 272-7968. The examiner can normally be reached on M-F 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William C. Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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